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EXAMINER

HOLTON, STEVEN E

ART UNIT

PAPER NUMBER

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Claim Objections*

1. Claims 1 and 7 are objected to because of the following informalities: the first limitation reading “a cellulose film provide with a...” should be edited to read “a cellulose film **provided** with a...”. This is merely a grammatical error that needs correcting.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7 and 9 -11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 7, the claim states that layers are a hardened product that hardens “upon irradiation with an active energy beam and metal oxide particles.” The Examiner notes that irradiation is done with a light source containing alpha and beta type particles. Irradiation is not down with metal oxide particles as suggested by the claim language. The Examiner feels that this claim language is intended to be drawn towards a statement similar to that of paragraph 15 of the specification, but as currently written this claim is unsupported.

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Claim 9 deals with a process for producing a touch panel and is dependent on claim 1 which is a touch panel. The combination of the claims makes it unclear if the Applicant wishes to patent a device or a process of production. Claim 11 further creates confusion by declaring a display unit made by a process dependent on a device. It is even further unclear what the Applicant wishes to be covered within the claim language. The Examiner recommends considering making claim 9 independent of claim 1 or some similar rewriting to remove the confusion as to the intent of the claim language.

Regarding claim 10, the claim does not formally further limit claim 1. As stated the preamble of the claim recites a display unit but merely comprises it of a touch panel of claim 1. Thus, there is no additional limitations beyond the scope of claim 1; merely a change of the preamble of the claim. Thus, it is unclear how the 'touch panel' described in claim 1 differs from the 'display unit' described in claim 10.

Claim 7 recites the limitation "the antireflective layer" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 2, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji et al. (USPN: 6611299), hereinafter Fuji, in view of Koike et al. (USPN: 6965191), hereinafter Koike.

Regarding claim 1, Fuji discloses, "A touch panel comprising: ... a hard coat layer (col. 13, line 12)... a polarizing film (Fig. 2, element A1; col. 6, lines 28-33); a retardation plate (Fig. 2, element A2; col. 6, lines 28-33); a first transparent conductive film (Fig. 2, element 5); a second transparent conductive film (Fig. 2, element 5; col. 6, lines 34 – 50); and a substrate (Fig. 6, elements 3 and 6; col. 6, lines 34-50), in this order, wherein the first and second transparent conductive films are provided so as to face to each other (Fig. 5; the films are on the inside of the respective substrates and facing each other), and ... the hard coat layer, the polarizing film, the retardation plate and the first transparent conductive film define a movable substrate (col. 13, lines 1-27)." However, Fuji does not expressly disclose "a cellulose film provide with a hard coat layer having a pencil hardness of 2H or more".

Koike discloses a filter device and hard coat covering for a display device using a cellulose film (col. 32, line 66 – col. 33, line 4) with a pencil hardness of "at least H, preferably 2H, and more preferably 3H or more (col. 31, lines 44-54)".

At time of invention it would have been obvious to one skilled in the art to modify the touch panel of Fuji with a cellulose hard coat film of Koike with a pencil hardness of 2H or more as specified by Koike as being a preferred hardness for a hard coat layer. The motivation for doing so would have been to provide scratch resistance and protection (Koike col. 31, line 27-29). Thus, it would have been obvious to modify the

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touch panel of Fuji with a hard coat with a level of hardness of preferably 2H or greater in view of the teachings of Koike to produce a device as specified in claim 1.

Regarding claim 2, Fuji discloses, "wherein the retardation plate is a  $\lambda/4$  retardation plate (col. 8, line 1)."

Regarding claim 5, Fuji discloses, "wherein the movable substrate has a thickness of from 80 to 300  $\mu\text{m}$ . (col. 13, lines 1-27 discuss the thickness of the polarizing plate, retardation plate and hard coat)" The Examiner notes that the thickness mentioned in the specification is approximately 62  $\mu\text{m}$  and that the shown substrate (Fig. 2, element 3) is approximately the same width as the retardation plate or polarizing plate, so would add potentially another 30  $\mu\text{m}$  to the thickness. Thus, it would have been obvious to one skilled in the art to produce a movable substrate of a thickness between 80 to 300  $\mu\text{m}$ .

Regarding claim 10, Fuji discloses a touch panel used in liquid crystal display device and above a liquid crystal cell (Fig. 2, element 8; col. 6, lines 28-33).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji in view of Koike as applied to claim 1 above, and further in view of Arakawa et al. (USPN: 6400433), hereinafter Arakawa.

Regarding claim 4, the combination of Fuji and Koike discloses all of the limitations except, "wherein the  $\lambda/4$  retardation plate comprises at least two optically anisotropic layers and at least one of the optically anisotropic layers comprises a liquid crystal compound."

Arakawa discloses a quarter wave plate with optically anisotropic layers (Fig. 1, elements A and B) and either one or both of the layers are made from liquid crystal molecules (Abstract).

At the time of invention it would have been obvious to one skilled in the art to modify the touch panel of the combination of Fuji and Kioke and use a quarter wave plate described by Arakawa. The motivation for doing so would have been, "to provide a circularly polarizing plate which functions within a wavelength range" and "to provide a circularly polarizing plate which can be easily prepared without a troublesome process (Arakawa, col. 2, lines 6-12)." Thus, it would have been obvious to combine the teachings of Fuji, Kioke and Arakawa to produce a device as specified in claim 4.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji in view of Koike as applied to claim 1 above, and further in view of Takushima et al. (USPN: 6224976), hereinafter Takushima.

Regarding claim 6, the combination of Fuji and Koike disclose all of the limitations except, "an antireflective layer comprising two or more layers having different refractive indexes provided on the hard coat layer, wherein the hard coat layer and the antireflective layer are layers comprising a hardened product of a hardening resin which hardens upon irradiation with an active energy beam."

Takushima discloses an adhesive transparent layer with an antireflective property to be used on electronic materials formed out of more than one element and hardened under irradiation (paragraph 45).

At the time of invention it would have been obvious to one skilled in the art to modify the touch panel device of the combination of Fuji and Koike with an antireflective layer of Takushima. The motivation for doing so would have been to provide "a glass having both of the scattering-preventing properties and the anti-reflective properties, which is useful for display devices (Takushima, col. 1, lines 16-19)". Thus, it would have been obvious to modify the touch panel from the combination of Fuji and Koike with a anti-reflective layer such as the one described by Takushima to produce a device as specified in claim 6.

Regarding claim 7, Takushima discloses the use of a indium-tin oxide layer on one side of the antireflective coating (col. 8, lines 26-36).

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuji in view of Koike as applied to claim 1 above, and further in view of Murata et al. (USPN: 6261665), hereinafter Murata.

Regarding claim 8, as discussed above the combination of Fuji and Koike disclose all of the limitations except, "wherein a side of at least one of the cellulose film and the retardation plate is saponified, the side facing to the polarizing plate."

Murata discloses an antireflective coating for display devices including LCD devices. Murata further discloses that the anti-reflective coating made of a cellulose film is saponified to the polarizing plate (col. 23, lines 49-57).

At the time of invention it would have been obvious for one skilled in the art to modify the touch panel produced from the combination of Fuji and Koike by saponifying



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the cellulose film to the polarizing plate behind as shown by Murata. The motivation for doing so would be "to provide an anti-reflection material which exhibits excellent anti-reflection properties (Murata, col. 3, lines 28-38)." Thus, it would have been obvious to combine Fuji, Koike and Murata to produce the device as specified in claim 8.

***Allowable Subject Matter***

7. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

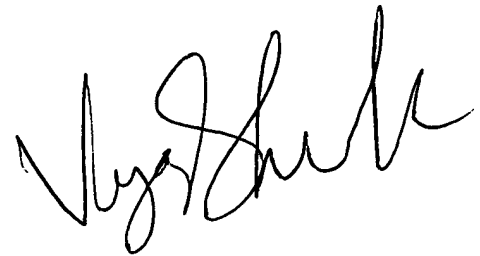
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Steven E. Holton  
December 19, 2005  
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A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, cursive script.

**VIJAY SHANKAR**  
**PRIMARY EXAMINER**